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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,853	12/30/2003	Alexander A. Maltsev	1020.P16743	9423
57035	7590	11/05/2007		
KACVINSKY LLC C/O INTELLEVATE P.O. BOX 52050 MINNEAPOLIS, MN 55402			EXAMINER JAIN, RAJ K	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 11/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/749,853

Applicant(s)

MALTSEV ET AL.

Examiner

Raj K. Jain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20071016 **3 PAGES CP #11107**
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

The abstract of the disclosure is objected to because of short length. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claim 10 is objected to because of the following informalities: In line 2 use of "an/or" doesn't make sense. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 recites the limitation "to one or more OFDM subcarrier symbols" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Bohnke et al (US 2002/0102940 A1).

Regarding claim(s) 1, 10, 12, 15, 16 & 18 Bohnke discloses an OFDM system (Fig. 1, abstract) comprising:

an adaptive bit loading block (Fig. 4) to receive channel state information for a plurality of subcarriers and to select a modulation scheme and a puncturing pattern for each of the plurality of subcarriers or for each of a plurality of subbands based on the channel state information (Claim 1, paras 12 and 38, modulation scheme is selected for each of the subcarriers and applying a puncturing pattern within blocks 3 and 4 (Fig. 4));

a puncturing block (Figs. 1 & 4, puncturing blocks P1, P2) to puncture a coded bit stream for each of a plurality of subcarriers or subbands in accordance with the selected puncturing pattern (para 12, a puncturing pattern is obtained based on desired code rate);

a mapping block (Figs. 1 & 4) to map a coded and punctured bit stream output from the puncturing block to one or more subcarrier symbols for each of the plurality of subcarriers or subbands (para 12, mapping block 7 map the coded bit stream and output to symbol generator 26).

Regarding claim(s) 2, 3, Bohnke discloses an encoder coupled to the puncturing block to produce the encoded bit stream (Fig. 1, ref. 2, para 12).

Regarding claim(s) 4, Bohnke discloses subbands comprises a plurality of subcarriers (general spec).

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Regarding claim(s) 5 & 14, Bohnke discloses mapping block 7 to map a coded and punctured bit stream output from the puncturing block to one or more OFDM subcarrier symbols (Fig. 4) for each of a plurality of OFDM subcarriers (para 12 mapping block 7 map the coded bit stream and output to symbol generator 26).

Regarding claim(s) 6, 7 & 11, Bohnke discloses OFDM modulator to modulate a selected subcarrier symbol onto a OFDM subcarrier for each of a plurality of OFDM subcarriers (Figs. 1 & 4, modulation is done by the bit mapping block and than forwarded to OFDM generator 26, paras 1-3).

Regarding claim(s) 8, 9 & 17, Bohnke discloses a puncturing pattern and/or modulation scheme are selected such that one or more sets of output coded bits in a puncturing pattern may map onto one subcarrier or one subband (para 35, link adaptation 17 (Fig. 3) selects suitable modulation scheme).

Regarding claim(s) 13, Bohnke discloses a puncturing block to puncture a coded bit stream for each of a plurality of subcarriers (Figs. 1 & 4, puncturing blocks P1, P2).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj K. Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

***Raj K. Jain***

***/Raj K. Jain/***

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October 16, 2007